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ABSTRACT

This summary report provides an overview of 23 pilot projects conducted in Australia to provide job training in more flexible modes. Each one- or two-page summary describes the following: state in which the project was conducted, flexible approach used, aims/methodology, participation/access, achievements/challenges, suggestions/dissemination, and contact information. Some common areas of achievement in the pilot projects include the following: web servers being set up; web pages being created; information, modules, and courses being made available over the Internet; and the professional development of staff. Issues identified through the pilots included the need for continual software and hardware upgrades, the rate that equipment becomes obsolete, the high cost of equipment, the threat of contracting a virus over the Internet, and the incompatibility between certain new software packages with the software already existing in the organization. (KC)

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1995/96

flexible delivery pilots

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AUSTRALIAN NATIONAL TRAINING AUTHORITY

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AUSTRALIAN NATIONAL TRAINING AUTHORITY

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foreword

Flexible delivery of training is important to vocational education and training because every person is different in the way they learn and acquire new skills. People need to access training out of 'normal' business hours, people want to integrate work and learning and enterprises want training to be specific to their requirements.

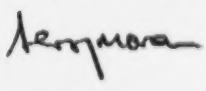
The question of how to make training more responsive and flexible has been a priority of both governments and training providers over recent years. VET providers are increasingly using technology to bring training to remote communities and to expand the range of opportunities in rural areas. Innovative companies are standardising their training by using computer assisted and computer managed learning. TAFE Institutes are offering courses via the internet, making training accessible in areas where there are insufficient numbers of viable programs, and VET programs are becoming an export item in an international education market.

Flexible Delivery is not just about using the latest technology. It is an approach based on the skill needs and delivery requirements of clients, not the interests of trainers or providers; it gives clients as much control as possible over what, and when, and where, and how they learn. While it may well use the technology of phone, fax, email, internet, computers, modems, cable TV, video conferencing etc - fundamentally, it changes the role of trainer from a source of knowledge to a manager of learning and a facilitator of change.

Flexible approaches in VET should not be taken to mean that only the delivery function of training providers needs to be flexible. All aspects of the operations of training providers: management of student learning, allocation of resources, planning, should be managed flexibly in the interests of clients. Open learning and flexible delivery provide the opportunity for open entry and continuous enrolment, individual training plans, opportunities for fast tracking and assessment on demand.

As a means of learning about and developing experience with flexible delivery, ANTA commissioned a series of 28 pilots to be trialled throughout the States and Territories. These pilots have been a learning experience for all involved, have led to the professional development of numerous teaching staff and the development of skills for other staff, and have led to a widening expertise in flexible delivery. This report highlights some of the experiences from the pilots.

The work that has been done by the Commonwealth, States and Territories, through the ANTA framework, is providing a system which supports flexible delivery. We can no longer consider flexible delivery as a separate initiative - it is a central principle for a national, responsive and demand driven vocational education and training system. It is now time for providers to put the research within this report into practice.



Terry Moran
Chief Executive Officer
Australian National Training Authority

July 1997

the pilots - background

In mid-1995, the ANTA Board established the National Flexible Delivery Taskforce, under the chairmanship of Brian Finn, to provide advice on how to proceed at the national level to make training more flexible.

To assist providers in trialing more flexible modes of delivery, ANTA funded 28 flexible delivery pilot projects (the subject of this report). These projects were established and administered by States and Territories and have covered a variety of approaches. The pilots ranged from developing computer learning modules for rural business management, through establishing a national electronic network of providers in the metals area, to setting up a flexible delivery centre for hospitality training. The pilot scheme also included funding to assist in the development of State and Territory Training Education Network *(TRAIN)* sites on the internet, which are now operational.

The pilot project scheme was completed at the end of 1996 and has been followed in 1997 by an implementation stage involving the investment of $2,000,000 in projects developed from the recommendations of the National Flexible Delivery Taskforce. This summary report is intended to provide an overview of the pilots conducted, their aims, achievements and methodologies, and provide contact information for those who want to follow up on these examples of innovation in training delivery.

Some common areas of achievement in the pilot projects include web servers being set up, web pages being created, information, modules and courses being made available over the internet and the professional development of staff.

Some issues identified through the pilots included the need for continual software and hardware upgrades, the rate that equipment becomes obsolescent, the high cost of equipment, the threat of contracting a virus over the internet and the incompatibility between certain new software packages with the software already existing in the organisation.

This summary report is an opportunity to acknowledge the leadership taken by project proponents in developing more flexible approaches to the delivery of VET. More importantly, though, the report aims to promote a culture of sharing information and experiences to assist managers, teachers, administrators, businesses, industry groups and individuals to fast track a more flexible and responsive system.

FLEXIBLE DELIVERY MECHANISMS FOR SMALL RETAILERS

To determine how the promotion of retail training programs can be accomplished through EdNA and investigate how existing video and text based programs can be adapted for delivery via EdNA

State

New South Wales

Flexible Approach

Test which modes of training delivery would be most effective for access to training in small business management and customer service

Aim/ Methodology

A Steering Committee was established, with the task of selecting flexible training packages for trial. Customer service and small business management were identified as top priorities in terms of the training needs of the industry.

A sample group of small retailers from New South Wales, Queensland and the Australian Capital Territory (12 businesses from each State) were selected to participate in the trial of the flexible training packages. The sample group used the training packages to deliver training within a given time frame and with as little support as possible, in order to best simulate a real life experience.

Project officers then made an assessment of the effectiveness of the flexible training packages (via questionnaire, phone interview and site visits).

Participation/ Access

12 retailers in the Australian Capital Territory, 12 in New South Wales and 15 retailers in Queensland agreed to participate in the trial. The businesses were selected from a wide range of industry sectors, experience levels, and city and country locations.

Achievements/ Challenges

75 per cent of the trial group retailers completed the training package. 85 per cent believed that their skills had improved as a result of the training. 8 out of 10 businesses felt that the self-paced packages would be more effective with external support such as workshops and telephone assistance. The remaining 2 out of 10 businesses were divided in opinion. Some felt that the packages were complete and effective without support services and some felt that they were ineffective and required face to face training.

During the running of the project the ITAB's computer system was infected by a virus which caused some problems. A system failure due to virus infection via the internet could have a negative impact on a small business. The implication is that the threat of contracting a computer virus could act as a disincentive for small retail businesses to access the internet. However, the use of anti-virus software can minimise this risk.

Suggestions/ Dissemination

The prohibitive cost and limited lifetime of training resources makes a hire service a valuable possibility. It is also recommended that training designers structure packages so that effectiveness will not be compromised by the inevitable breaks in training flow due to the demands of the retailing business.

Conducted by:

NSW Retail and Wholesale Industry Training Council Ltd

Contact:

Mr John MacNaughton **Ph (02) 9267 9500** **Fax (02) 9267 9404**
Email nswrwitc@ozonline.com.au

FLEXIBLE DELIVERY CENTRE IN HOSPITALITY

To establish a flexible delivery centre for the hospitality industry and make resources, assessment tasks and a guide for applying RPL in bakery available nationally through EdNA

State — **New South Wales**

Flexible Approach — **Giving students more choice over course pace, module sequence, attendance times and entry and exit points by implementing self-paced, resource-based modes of learning**

Aim/ Methodology — Students were surveyed to establish interest in flexible learning. Learning guides have been produced for Baking and Commercial Cookery to lead students through available materials. Videos of skill demonstrations have also been produced where needed.

Participation/ Access — 220 students have been enrolled in flexibly delivered Baking courses. Forty students are enrolled in Commercial Cookery in the pilot program for that section.

Achievements/ Challenges — A Hospitality Flexible Learning Centre has been established. This is presently being used for Commercial Cookery. The challenge is to identify the appropriate courses/modules and students to successfully implement flexible learning.

Future Plans/ Dissemination — It is planned to introduce flexible learning to other Hospitality sections in 1998. The results could be disseminated by offering workshops/tours, producing a video, and/or making secondments available to visiting staff at appropriate times.

Conducted by: — **Sydney Institute of Technology, East Sydney campus**

Contact: **Ms Margot Cross** **Ph (02) 9339 8666** **Fax (02) 9339 8700**

TRAIN IMPLEMENTATION

To develop multimedia training programs in the use of TRAIN in all media on which it is available. Each State and Territory, with the exception of Victoria, was funded to conduct a TRAIN implementation pilot project. (Victoria undertook to develop its TRAIN directory without ANTA funding).

States

New South Wales, Queensland, South Australia, Western Australia, Tasmania, Northern Territory, Australian Capital Territory

Flexible Approach

Creating a *TRAIN* (The Australian Training Information Network) site on the internet in each State and Territory, as an information source on available products, policy, services and organisations in vocational education and training

Aim/ Methodology

To create a focus for internet training activities in each State/Territory.

TRAIN was developed by NSW BVET at the request of industry in November 1995. The first stage of the pilots consisted of the development of a database of information for *TRAIN* by each State/Territory involved in the pilot. The second stage involves the ongoing promotion of *TRAIN* within the State/Territory and the training of key clients. The promotion of *TRAIN* is centred around workshops, professional development forums, and presentations to industry and educational groups.

Most States employed a project team to develop the *TRAIN* web site, prepare and update entries and engage in promotional activities. The project teams also worked to develop a database of VET course information to be available via the internet.

NSW BVET developed a *TRAIN* Sample CD ROM which included the *TRAIN* internet site and browser on a CD ROM. They also developed and produced an interactive multimedia promotional Diskette and *TRAIN* flyer for use by all States and Territories.

Participation/ Access

TRAIN is now fully operational and anyone with internet access can access the site. *TRAIN* is also available in some States/Territories via a Fax to Fax service for those without internet access.

The project involved Web consultants, departmental staff, industry and educational leaders. Promotion, testing, evaluation and training in the product is now being undertaken in most State and Territory departments.

Web server usage statistics indicate that *TRAIN* is being accessed by a large number of information seekers, both within Australia and Internationally.

Achievements/ Challenges

TRAIN is a user-friendly training information service which also incorporates links to the national *TRAIN* database. It contains information on providers, organisations, courses, job opportunities, VET policy and current issues. As an internet tool it is potentially available to anyone.

The *TRAIN* Sample CD ROM provides internet training and the opportunity for users to become familiar with using the internet without actually accessing it.

An evaluation of the extent to which teachers and trainers use *TRAIN* will be conducted following the current round of promotional activities. It is expected that *TRAIN* will prove to be a most effective way to increase confidence by these groups in electronic communication and learning methods.

Information on registered providers and access for client groups, including Aboriginal programs, access for disabled students, women's programs and adult migrant English services, is included in most databases.

Suggestions/ Dissemination

As mentioned previously, an interactive multimedia promotional Diskette was produced by NSW BVET and 5000 copies were distributed. 2000 copies of the Sample CD ROM and accompanying flyer were also produced and distributed widely. The CD ROM contains a copy of all the information located on the *TRAIN* web server at the time the CD ROM is produced. This distribution will form the basis for a subscription service.

In the Australian Capital Territory, a promotional brochure on TRAIN has been prepared, printed and widely distributed. The ACT Vocational Education and Training Authority aims to make *TRAIN* progressively more accessible. Examples of this include placing a computer for public use in the reception area of the authority's training shop and providing *TRAIN* information on the Australian Capital Territory government public access touch screen displays in various locations.

In Tasmania, the promotion of *TRAIN* continues with the awareness program for EdNA. Presentations are being given to training providers, ITABs, employers, teachers and VET managers to raise awareness of the valuable resources available from both web sites. Use of the *TRAIN* web site is increasing steadily with over 1600 Tasmanian *TRAIN* pages being accessed during May 1997.

TRAIN is accessible through the Northern Territory Employment and Training Authority Home Page. In the Northern Territory, *TRAIN* is being marketed to potential clients with the aim of putting more information on the Northern Territory catalogue and in promoting the use of *TRAIN* as a research tool. Feedback to date indicates strong support in both areas. Support for *TRAIN* is expected to grow as Northern Territory Employment and Training Authority develops new Open Learning Centres in regional and remote locations in the Northern Territory.

Feedback about the project has been obtained through site visits to stakeholders. For external clients, quality and relevance of information is vital. Project managers write: An important issue which has arisen as the project continues is the rapid rate of change in VET administration. Online technology is the ideal vehicle to inform the VET community of developments as they occur.

internet Address

http://www.opennet.net.au/partners/bvet/train

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OPEN LEARNING IN THE ACE SECTOR

To develop a comprehensive open learning network in NSW ACE, including satellite delivery for ACE courses. Information programs will educate and train ACE providers in the use of flexible delivery

State

New South Wales

Flexible Approach

Translation of Adult and Community Education vocational education and training into flexible modes of delivery

Aim/ Methodology

To develop an environment of open learning in the Adult and Community Education sector in New South Wales, incorporating professional development for educators, course conversion to flexible delivery, workshops and evaluation. The course chosen for adaptation to flexible delivery mode was the Riverina Community College's Medical Terminology course.

Participation/ Access

The project has involved a partnership between the Adult and Community Education sector and TAFE NSW. In particular, the pilots have been aimed at provision in the New England/North West Region of TAFE.

Achievements/ Challenges

The originally forecast timelines were revised due to unanticipated staff changes, a delay in the arrival of flexible delivery professional development kits *(Emerging Practices in the Flexible Learning Organisation)* and the time and amount of consultation required to develop and deliver the series of flexible delivery professional development workshops.

All the planned strategies will be implemented according to a revised timeframe for completion of the project. Course conversion of an ACE module will continue during 1997.

Achievements to date include the completion of the narrowcast delivery pilot. Other achievements are mainly network based, in terms of establishing the human and structural resources needed to make flexible delivery in ACE work. For instance, the establishment of a flexible delivery working party, a pilot action learning set, appointment of a co-ordinator, publicity through the Net*First* and ACE VET News newsletters, and workshops in professional development have occurred in various parts of the state.

Suggestions/ Dissemination

Further evaluation of the pilot will be conducted in the future.

Conducted by:

NSW Board of Adult and Community Education (BACE)

Contact:

Ms Denise Sweeney Ph (02) 9266 8277 Fax (02) 9265 8076

KEY COMPETENCIES FOR A MOBILE WORKFORCE

To identify and deliver training to mobile transport workers who cannot access training at specific locations. The project will concentrate on literacy and numeracy skills as preparation for required Dangerous Goods courses

State — **New South Wales**

Flexible Approach — **Delivery of training in dangerous goods through distance learning and the delivery of language, literacy and numeracy training through a combination of distance learning and face-to-face delivery**

Aim/ Methodology — This project comprised five stages. Stage 1 entailed an initial literacy numeracy survey and research. Stage 2 was a survey of dangerous goods requirements and Stage 3 was a survey of technical options. These have been completed. Stage 4 (pilot production training materials and literacy and numeracy training) and Stage 5 (pilot training materials and training in dangerous goods) have only partially been completed to date.

It was intended that participants be referred from one provider to another, but in practice this aspect of the project did not prove to be as successful as originally anticipated. In dangerous goods training, and to a lesser degree in language, literacy and numeracy training, information was delivered by telephone and mobile telephone while participants were on the job.

Participation/ Access — Stages 4 and 5 of the project involve training for up to 100 persons in total, covering literacy and numeracy training by the Adult Migrant Education Service (AMES), and in dangerous goods training by OTEN. 22,000 fliers were distributed by the ITAB, the relevant union and transport industry publications, resulting in 300 inquiries.

Achievements/ Challenges — OTEN has completed the production of the course materials and video (for flexible delivery) and has despatched the material to 100 enrolled students. OTEN has been accredited as the preferred training provider by the Environmental Protection Agency (EPA).

It is estimated that 5 percent of people working within the industry have no language, literacy or numeracy skills. Five of the 100 course participants are receiving literacy/numeracy support from AMES, and this number is likely to grow. Using different training providers (AMES and OTEN) in a co-ordinated way did not prove to be as successful as anticipated. This type of project may have resulted in more literacy/numeracy backup if a single provider had been used.

Suggestions/ Dissemination — The results of the project will be disseminated by fax bulletins by mid August. The results will also be included on *TRAIN* internet site in the future and included in the next edition of Transport Workers Union newspaper which is published in October.

Conducted by: — **NSW Transport and Distribution Industry Training Advisory Board Ltd**

Contact: **Mr Adrian Denyer** **Ph (02) 9745 2092** **Fax (02) 9745 2209** **Mobile 0419 260 277**

DELIVERY OF ANIMAL PRODUCTION MODULES THROUGH CAL

To transfer some existing animal production course modules into multimedia forms and trial this with farmers and agricultural workers

State

New South Wales

Flexible Approach

The delivery of training by distance through multimedia (World Wide Web and CD ROM) to provide farmers with access to modules of accredited training

Aim/ Methodology

This project was initiated to develop and trial the delivery of some common modules in Animal Production via the internet. The information technology that will be used through this project has great potential to overcome the barrier of isolation that is a major factor in the low VET participation rates in the rural industries.

The New South Wales State Training Profile identified the need for strategies to increase participation in training and for the improvement of communication networks to satisfy long term training needs for rural industry. Both these areas were addressed through this project.

NSW Agriculture has an extensive farmer client base through its home study courses (about 6,000 clients in 1998), short courses and extension programs. A sample of these could be accessed for the project.

The textual and graphical materials prepared by the project team were in electronic form prior to conversion to web pages. This included a series of case studies about the experiences of a farmer establishing an opportunity feedlot, a study guide for Yanco students, and lecture material developed by Yanco staff. The web page structure was completed, as well as a set of web pages taking forms- based input that allowed farmers to calculate the profitability of feedlotting for their situation. The core content of the modules - the NSW Agriculture Feedlot Manual - has been made available to the project and required conversion to Web pages.

The trialling of the modules in multimedia format has not yet occurred.

Participation/ Access

Access to vocational education and training by the rural industries will be increased as a result of this project.

Achievements/ Challenges

Achievements include:

- the transfer into multimedia formats (World Wide Web and CD ROM) some existing accredited animal production modules from the University of New England (UNE) and NSW Agriculture's college at Yanco and the design of appropriate web pages.
- an improved understanding of design considerations in developing learner interfaces suitable for the client groups targeted (ie. web pages that provide various types of access to the basic content pages).
- an improved understanding of how farmers and agriculture students use learning materials in multimedia format based on web pages.
- improvements in the skills of agricultural college and university staff in the use of these delivery modes.
- improved access to Animal Production courses for the rural industries.

- co-operation between VET (Agricultural Colleges) and Higher Education sectors
- availability of articulation pathways for students from Agricultural College to University courses.

The project had to be put on hold for many months until a copyright agreement was finalised between NSW Agriculture and the University of New England. This agreement was signed late in 1996 and includes the licensing of UNE to publish NSW Agriculture's Feedlot Manual on the University's World Wide Web site and CD ROM. The lesson learnt from this exercise was that while those doing the project may be relatively relaxed about questions of intellectual property and copyright, those in other parts of their organisations may not be as relaxed. The novel characteristics of Web-based delivery raised a number of difficulties for those concerned with protecting the intellectual investment of their organisation - not the least being perceived difficulties in restricting access.

Conducted by: **NSW Agriculture (In conjunction with the University of New England and Rural Development Centre).**

Contact: **Mr Warwick Moore Ph (063) 91 3297 Fax (063) 91 3244**

INFORMATION TECHNOLOGY

To develop resource materials, learning/assessment guidelines, an internet page for information technology and a student support link for students in the IT Certificate 4 and Certificate 3

State — **New South Wales**

Flexible Approach — **The development of print and WWW resources to increase the range of options available for students at home and in the workplace to access resource based delivery of the IT Certificate 4 and Certificate 3**

Aim/ Methodology — The project was intended to increase access to National modules and the NSW TAFE Information Technology Certificate courses by making learning resources, teaching and peer support and assessment processes widely available, including through the WWW and EdNA.

Participation/ Access — This project involved links between Open Training Education Network (OTEN), the North Coast Institute of TAFE and Sydney Institute of Technology in New South Wales and the Outer Eastern College in Victoria.

There were 1250 enrolments in Information Technology courses in Semester 2, 1996, through OTEN, a figure in excess of projections. A pilot of wholly internet based delivery is being conducted in 1997.

Achievements/ Challenges — Resources to support the delivery of eleven national modules were prepared for flexible delivery. Difficulties were encountered in several modules due to the highly practical nature of the content. The solution required writers with expertise in both the content area and distance learning.

A style guide and module template specially adapted from the OTEN standard were developed to assist staff and writers to design activities for delivery over the internet.

The pages in the new WWW site will contain metatags consistent with the EdNA specifications.

All teachers in the Information Technology course have access to the internet and interact with students by email. Workshops and staff development have been an important part of the design and development process.

Suggestions/ Dissemination — A detailed evaluation of the project has been completed and has been used to assess technological requirements for current and future course delivery via the internet. This will be presented as a paper at the AusWeb97 Conference in July, and is available at
http://ausweb.scu.edu.au/proceedings/gibson/paper.html

As a result of the experience gained during this project a new form of student interaction with the learning process has been developed and is currently being implemented.

Conducted by: — **Open Training and Education Network**

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FIREFIGHTING

To provide learning guides and assessment tasks using Opennet and EdNA and develop links with Fire Service Providers for exchange of student data

State — **New South Wales**

Flexible Approach — **To make learning resources available via the internet for students studying in rural and remote areas**

Aim/ Methodology — The major emphasis of the project was the acquisition of learning resources from external agencies including the New South Wales Fire Brigade and various training providers and the production of new resources to support the flexible delivery of the Diploma in Firefighting. In addition, the project involved the transfer of learning resources to the internet.

Participation/ Access — Development processes have been cumulative and the 11 modules now available complement those available through other mechanisms.

Enrolments commenced in Semester 2 of 1996, with 104 students enrolled in a variety of subjects using resource based learning strategies. This has risen to 400 in 1997 - with students located throughout Australia.

Achievements/ Challenges — Learners Guides for 11 modules are complete. To assist the literacy and numeracy needs of students, a module on student support and counselling was made available.

The WWW learning site will be moved to a permanent server and linked to EdNA, enabling wide-ranging national and international educational access.

Student data links to the New South Wales Fire Brigade and other fire service providers has not yet occurred as planned and will be put in place when appropriate infrastructure in Fire Stations has been established.

Suggestions/ Dissemination — Significant interest has been generated in the available training. The methods employed by the project team have included limited advertising, the internet, word of mouth and student newsletters. Newsletters have also been sent to every fire brigade station to inform potential students of the availability of the course. In addition, the OTEN staff have attended national conferences and presented papers at national conferences.

Conducted by: — **Open Training and Education Network**

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AQUACULTURE

To develop and produce additional modules for the Advanced Certificate in Aquaculture Production (Freshwater)

State — **New South Wales**

Flexible Approach — **The development of print-based modules and internet resources to support flexible delivery of national certificate**

Aim/ Methodology — The project involved the production of print based modules to support flexible delivery of the Freshwater Aquaculture Certificate, with accompanying online resources for access through EdNA.

Module materials were first developed and then trialled by students in workshops. Following the workshops and analysis of student responses, final amendments were made to the learning materials.

Participation/ Access — This was a joint project, involving staff from North Coast Institute of TAFE and OTEN. Students were enrolled to use the modules for Semester 2, 1996.

Achievements/ Challenges' — Six modules were identified for development.

Five of the modules are completed. The schedule of achievement is monitored by the National Fishing Industry Education Centre (NFIEC) in Grafton, New South Wales.

One of the major challenges of this project arose from the fact that it is a new course, and has a heavy emphasis on practical experience. As such, development has proceeded at a pace, to match NFIEC staff time constraints and student needs.

Suggestions/ Dissemination — Students feedback on the print based material and the internet based delivery has been very positive.

Conducted by: — **Open Training and Education Network**

Internet Address — **http://www.tafensw.edu.au/oten/aqua**

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MAJOR PROJECT (VICTORIA) - VIRTUAL CAMPUS

To develop VET delivery using online technologies that includes a major extension of the Victorian WAN into a support for educational technology and delivery

State

Victoria

Flexible Approach

Preparation for VET delivery using online technologies

Aim/ Methodology

This project involved the development of VET delivery using online technologies and includes a major extension of the Victorian WAN into a support network for educational technology and delivery.

The methodology co-ordinates a range of flexible products using computer communication techniques, and develops VETnet Victoria as a virtual campus providing one-stop training information and delivery support.

Participation/ Access

The pilot was conducted by the Office of Training and Further Education (OTFE).

A mixture of urban and rural institutes were chosen to test the first version of the virtual campus software during Semester 1, 1997.

Achievements/ Challenges

The four areas of activity of this project were the establishment of the OTFE information service via the internet, VETnet Victoria, the Online Training Development Fund and a professional development module in online technologies. The address of the web site which was developed as part of the pilot is **http://www.otfe.vic.gov.au**

Part of the project was a forum which was attended by a large number of representatives of institutes. This gave the representatives the opportunity to discuss issues relating to internet usage.

The project report includes a very detailed research report entitled *Criteria for the Development of a Virtual Campus for the Victorian State Training System*, and the development of tender guidelines and specifications for creating the online training environment.

Suggestions/ Dissemination

One of the most important elements of the project was the high degree of communication and information sharing between OTFE, Victorian TAFE institutes, other State/Territory training systems and education departments.

Conducted by:

Office of Training and Further Education, Victoria

Internet Address

http://www.otfe.vic.gov.au.

Contact:

Mr Rodney Spark Ph (03) 9628 2166 Fax (03) 9628 3966
Email: rodney.spark@dse.vic.gov.au

A total of 17 pilots which will contribute to the further development of EdNA

State **Victoria**

Flexible Approach **Trials of online learning via Computer Mediated Communication (CMC) projects**

Aim/ Methodology 17 trial projects were selected from a range of institutes and options. These were:

- Industry training links via the internet (Wangaratta)
- Online mining (Bendigo Regional)
- Professional development for audiographic conferencing (Bendigo Regional)
- National warehousing project management training (Western Melbourne)
- Using technology to expand open learning (Outer Eastern)
- Adult literacy research network node for Victoria (Victoria University of Technology)
- Flexible delivery WWW home page discussion group (RMIT)
- Bulletin board for Scitech (Box Hill)
- Online support and delivery for education (Swinburne/YCIN)
- Flexible delivery of national information technology curriculum (School of Mines & Industries, Ballarat)
- Off campus delivery of certificate of basic electronics via the internet (Gordon)
- Collection marking and recording of assignments and distance delivery via the internet (Peninsula/ Wodonga/ Western)
- Delivery of training on the internet - teachersí and learnersí perspectives
- Remote area technology training (East Gippsland)
- Staff development to promote Scitech modules via the internet (Box Hill)
- EdNA starter pak [sic] (Box Hill)
- Computer training for building and construction teachers

Participated/Access (Holmesglen) Numerous TAFE institutes as indicated above.

Conducted by: **Office of Training and Further Education, Victoria**

Contact: **Mr Rodney Spark** **Ph (03) 9628 2166** **Fax (03) 9628 3966**
Email: rodney.spark@dse.vic.gov.au

DEVELOPMENT OF RESOURCE PACKAGES FOR FRONTLINE MANAGEMENT TRAINING

To produce a national certificate in workplace leadership utilising existing print based materials enhanced by CML and Cdi and to provide professional development for facilitators

State

Queensland

Flexible Approach

Production of a matrix of Frontline Management Resources against existing National Service Skills modules and local existing CD ROM resources

Production of a print based resource package for the unit of competency for Frontline Management and two CD ROMs for selected units

Aim/ Methodology

The aim of this project was to produce an accreditation framework and resources for the Frontline Management Competencies.

Participation/ Access

The project involved a number of staff from different organisations who are experts in various fields. These included CD ROM authors, a consultant contracted to advise on instructional design, chief writers and other staff. The project was conducted by TAFE Queensland using the expertise of both internal and external personnel.

Achievements/ Challenges

A variety of activities were undertaken as part of this project. The major part of the project entailed producing a matrix of national generic management modules and Frontline Management competencies.

Eleven self-paced print based resources have been written with reference to units of competency and have been evaluated by external reviewers for quality and appropriateness. Feedback has been very positive overall.

The project also included production of a CD ROM entitled *Managing Workplace Information*, with approximately 5 hours of structured interactive training, allowing training to be customised to individual work situations. Materials can be collected from the package to facilitate the assessment of competencies against Frontline Management competency standards.

Another CD titled *Managing Quality Customer Service* was completed in May 1997.

Suggestions/ Dissemination

The print-based unit guides were evaluated by a project management sub-group. As an example, the Unit 5 competency *Managing Operations to Achieve Planned Outcomes* was assessed as "95% effective", with some input provided on structure and design.

Conducted by:

Curriculum Research and Development, Vocational Education and Training Directorate, TAFE Queensland

Contact:

Mr John Blakeley Ph (07) 3247 5281 Fax (07) 3247 5215

THE FISHING INDUSTRY

To develop and deliver training resources via EdNA and CD ROM

State/Territory

Queensland and the Northern Territory

Flexible Approach

The development and delivery of training resources to meet the training needs of the industry via EdNA (using a satellite telephone) and CD ROM

Aim/ Methodology

The aims of this project were:

- to develop the mandatory training requirements in a flexible delivery format
- to develop flexible delivery modes of training, identify best practice based training (CBT) format for future use in all fishing industry training curriculum design by the National Fishing Industry Education Network Curriculum Development Network; and
- to align and develop national competency standards to support the Competency Based Training Curriculum.

competency

Participation/ Access

This was a co-operative project between the Queensland Fishing Industry Peak Industry Bodies and the Northern Territory Fishing Industry Peak Industry Bodies.

Australian Commercial Fishing and the Australian Maritime Industry were involved through the National certification requirements.

Achievements/ Challenges

Two training providers in Queensland and one in Northern Territory have been exposed to and received professional development and experience in the delivery of full Competency Based Training and the incorporation of a variety of flexible entry and exit points. The industry has access to the latest converted curricula.

Learners participating in the trial have had access to a range of flexible entry and exit points and a range of learning methodologies.

The technology is available but currently the cost of computer aided learning package development is proving prohibitive. The co-operative is investigating a more cost effective method of production.

Suggestions/ Dissemination

The QFITC has presented the outcomes of the project at a Curriculum Development Committee meeting in August (Northern Territory), distributed curricula to all Australian Seafood Industry Education Network (ASIEN) members on disk and distributed draft curricula to Maritime Project in New South Wales in May 1996. Demonstrations of the computer aided learning packages have been made to ASIEN members in November 1996 and to the Australian Seafood Industry Council. Regional workshops have been conducted in Cairns, Townsville, Mackay, Yeppoon, Gladstone, Bundaberg, the Gold Coast and the Sunshine Coast.

The outcomes of the project have been presented to various commercial fishing organisations in the Northern Territory.

Conducted by:

QLD: Queensland Fishing Industry Training Council
NT: Seafood and Maritime Industries Training Ltd.

Contact:

QLD: Mr Murray West (07) 3225 1854 (07) 3225 1800
NT: Capt Richard Teo (08) 8981 0495 (08) 8981 5063

ONLINE EDUCATION PROJECT (Part A)

To develop the technical and human support infrastructure for online delivery

State

South Australia

Flexible Approach

Development of infrastructure to support online delivery of VET

Aim/ Methodology

This project addressed the overall human and technical infrastructure required to:

- provide for the development of new methods of delivery and the support of learners through online technologies.
- provide for more flexible delivery of courses and greater access to, and information on, education and training opportunities for students and industry.
- ensure that VET staff take a key role in the training effort required for the effective adoption and use of online technologies.
- provide opportunities for local and national collaboration across the VET sector.

The major areas of infrastructure addressed were:

Human Resources and Education Processes

- Management of project
- Online education support unit
- Change management strategy
- Staff development - internet skills and methodology
- Development tools and strategies
- Establishment of online network community
- External evaluators and collaborators
- Identification of policy requirements
- Connections to national networks and committees

Technical Infrastructure and Support

- Upgrade of state-wide network and internet servers
- Specification and selection of interim online delivery platform
- Internet services eg List, Web Forum and Chat
- Establishment of online helpdesk infrastructure
- Online access to course databases *(TRAIN)* and project information

This infrastructure supported 14 pilot projects (see Online Education Project Part B on page 19).

Participation/ Access

DETAFE has adopted an online strategy and there has been broad support and involvement across the system and at all levels.

Achievements/ Challenges

DETAFE is now building on the experiences and insights from the pilot projects. Further work on infrastructure requirements is now being undertaken and a major online development strategy has begun.

Suggestions/ Dissemination

Support from senior management is critical to the success of any online strategy.

A change management process is required for the system wide adoption of online delivery methodologies.

Further project information can be found at:
http://www.tafe.sa.edu.au/lsrsc/database/home.html

Conducted by:

SA Department for Employment, Training and Further Education

Contact:

Mr Neil Strong **Ph (08) 8207 8672 Fax (08) 8207 8552**
Email neils@tafe.sa.edu.au

ONLINE EDUCATION PROJECT (Part B)

To conduct a number of pilot projects to test and evaluate various aspects of online delivery

State — **South Australia**

Flexible Approach — **Pilot projects were conducted to test and evaluate various aspects of online delivery**

Aim/ Methodology — The following 14 pilot projects were conducted:

- Evaluation - Online delivery of Communications Studies modules.
  (Adelaide Institute of TAFE - Sue Goldman)
  Brief Description: Evaluation of established campus based online delivery project. This project will provide an early indicator of issues with online delivery.
- Evaluation of online delivery for Regency Hotel School.
  (Regency Institute - Peter Popp)
  Brief Description: Online delivery of Quality Management module.
  An off line trial with a focus on development of online materials, online delivery and student management systems.
- Wine Industry (Murray Institute - Trevor March)
  Brief Description: Delivery of training into workplace for Wine industry.
  Focus on management of online delivery.
- Online delivery - Graphic Prepress
  (Western Adelaide Institute - Andrew McGowan)
  Brief Description: Trial delivery of Graphic Prepress module to Canberra Institute and workplace sites in Adelaide and country South Australia and New South Wales. Future delivery to Tasmania. A report to national ITAB.
- Online delivery - Graphic Prepress
  (Western Adelaide Institute - Andrew McGowan)
  Brief Description: Trial delivery of Graphic Prepress module to Canberra Institute and workplace sites in Adelaide and country South Australia and New South Wales. Future delivery to Tasmania. A report to national ITAB.
- DETAFE Preview Centre database on web
  (Adelaide Institute - LEARN - Di Booker)
  Brief Description: Develop web interface for the TAFE SA Learning Materials Preview Centre database.
- Online assessment (Douglas Mawson Institute - Nick Williams)
  Brief Description: Trial assessment methodology via the WWW, including the automated marking of assessments and recording these marks to a database.
- Virtual guides (Torrens Valley Institute of TAFE - Stephen Barnett)
  Brief Description: Creation of discipline based WWW directories of internet resources. Will align with other funded South Australia projects.
- Electronics Servicing (Torrens Valley Institute - Alan Manley)
  Brief Description: Online delivery of 6 Electronics modules into workplace and rural areas. Focus on enterprise training.

- Small to medium enterprise remote education project
  (Onkaparinga Institute - Phil Hart)
  Brief Description: Online delivery (including desktop video conferencing) to small to medium enterprises in remote areas (Kangaroo Island).

- Online delivery of Preparatory Education - literacy.
  (Adelaide Institute - Doug Purcell)
  Brief Description: Trial online delivery of Preparatory Education modules, including literacy.

- Management of online delivery (South East Institute - Denise Bell)
  Brief Description: Review and trial of online management of students.

- Online delivery - IT Module (Douglas Mawson Institute - Nick Williams)
  Brief Description: Online delivery of IT module to SE Institute.

- Online delivery Advanced Engineering Modules
  (Douglas Mawson Institute - Doug Thomson)
  Brief Description: Trial delivery of 3 Advanced Engineering Modules.

- Access - internet Café (Para Institute - Paul Mersh)
  Brief Description: The project addresses online access issues for target groups.

Participation/ Access Numerous TAFE Institutes and industry sites.

Individual project details are available at:
http://www.tafe.sa.edu.au/lsrsc/database/home.html

Conducted by: **SA Department for Employment, Training and Further Education**

Contact: **Mr Neil Strong** **Ph (08) 8207 8672 Fax (08) 8207 8552**
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ELECTRONIC PROPAGATION DELAYS

(See screen sample in appendix - page 30 - 31)

To develop four computer based systems for teaching students how to determine electronic propagation delays (Module EA185) and evaluate the educational effectiveness and practicality of different technologies. To develop the skills of VET staff in computer based training

State

Western Australia

Flexible Approach

Delivery of computer assisted learning (CAL) using four different technologies: computerised books, multimedia, simulation based training and intelligent tutoring

Aim/ Methodology

To evaluate technologies by comparing students' subjective ratings of training and mastery of the material (by testing their recall of course material, their ability to summarise and synthesise course material and their ability to apply course material to solve practical problems).

Participation/ Access

The project involved five groups: researchers from two Centres at the University of Western Australia; multimedia experts from the Advanced Manufacturing Technologies Centre; and domain experts from TAFE's South Metropolitan College and the Western Australian Electronic & Information Technology Industry Employment & Training Council.

Achievements/ Challenges

Three technologies were evaluated (using small samples). In general, ratings and mastery of course material were lowest for computerised books. Subjective ratings were highest for multimedia but mastery of course material was highest for intelligent tutoring (on all types of test).

The methodology for developing CAL packages requires a structured, very fine-grained analysis of curriculum (especially for simulations and intelligent tutoring packages). Analysis of the electronic propagation delays module (EA185) revealed serious "gaps"in the curriculum and our domain experts had to develop new material to fill these gaps. In the process they learned new skills in analysing and structuring curriculum, but considerable time was required to learn these new skills.

Training packages were developed for only one platform, largely because of the limitations in current software for authoring/presenting lessons. This problem is being pursued by the UWA Centres and the AMTC, which have obtained a large grant (from the Department of Industry, Science and Tourism) to develop generic software for flexible delivery of training which is platform independent.

Suggestions/ Dissemination

The educational effectiveness of CAL packages should be assessed using tests which measure a student's mastery of the material, not with a student's subjective ratings.

Our results suggest that the most effective form of CAL is an intelligent tutoring system.

A fine-grained, highly structured analysis should be performed to determine whether a curriculum is suitable for CAL development.

Resources should be budgeted for teaching domain experts (such as University or TAFE lecturers) skills needed to perform such analyses.

Conducted by:

University of Western Australia

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Mr Dan Milech - Ph (08) 9380 1767 Fax (08) 9380 1169
Email dan@psy.uwa.edu.au

EdNA AND INTERNET COURSE DELIVERY

To develop infrastructure which allows for course delivery to remote and international clients using the internet, to develop TAFE International's home page and to increase student enrolments for TAFE courses and users of networks such as EdNA

State — **Western Australia**

Flexible Approach — **The development of infrastructure that will allow course delivery to remote and international clients using the internet**

Aim/ Methodology

The project objectives were to establish TAFE International's home page, with links to EdNA, to develop learning module (writing for business) for WWW delivery and to provide training in web publishing and usage.

The project phases progressed through identifying hardware and software requirements to data collection, web design, installation and configuration of server and set up of home page.

Participation/ Access

The project team consisted of the TAFE International staff and an external consultant. The consultant was required to provide skills and information for the design, installation and configuration of the Lotus Notes server that was an integral part of the project. Material for the Home Page was produced by a wide cross section of staff and all graphic design was carried out in-house.

Achievements/ Challenges

All project phases have been completed, save for full data take up and access, which has been modified to reflect organisational changes in the Curriculum and Customised Training Network (now called TAFE International). Despite this, preparation of user guides and project staff training has also been completed.

A web system has been established and the infrastructure necessary to allow for educational source delivery over the internet has been established. The benefits of the development include the ability to update information on a daily basis, provision of information to clients via the WWW and a reduction in publishing workload through automated transfer of content.

The further development of this Home Page project has extended access to TAFE International's products and services.

The project has provided additional flexibility to the enrolment process in Australia and off-shore.

Suggestions/ Dissemination

The project managers identified the internet as the most feasible vehicle for disseminating results of the project. The TAFE International Homepage should be available on the internet later this year.

Conducted by: — **TAFE International (Curriculum and Customised Training Network)**

Contact: **Mr Tom Locke** **Ph (08) 9227 3296** **Fax (08) 9227 3473**

PROFESSIONAL DEVELOPMENT FOR EdNA INFRASTRUCTURE

To train a number of college based co-ordinators to facilitate the rapid development of curriculum on EdNA. The project includes the creation of a model Web server on the departmental server. The objective is to empower colleges to develop their own content

State

Western Australia

Flexible Approach

Development of a prototype module in both paper based and electronic formats, with the option for the customer to acquire both if required

The establishment of student management strategies around existing communications methods and supplemented with email and facsimile

Aim/ Methodology

This project involved the development and implementation of a student management model for students enrolled in modules delivered via the WWW. It also included the establishment of a server and software infrastructure for conversion of modules for use on the WWW and associated staff development.

Participation/ Access

The methodology has been piloted (last year) and promotion of the project continues this year. Additional module examination and development, and staff development is ongoing.

Achievements/ Challenges

Achievements to date include

- the analysis of hardware and software requirements for the establishment of a web server for the development of an automated WWW publishing system
- the identification of key areas of development
  1. Module resources - suitable for delivery on the WWW
  2. Staff training in the use of WWW publishing software
  3. Student management - to manage student interaction, assessments and administrative matters
- the development of strategic relationships with both Sun Microsystems and Ferntree Consulting which has provided the project with
  - a higher than expected level of diffusion of the technology, and the subsequent flow-on benefits to both the project and the organisation and the training
  - a training partnership for this and future projects
- the development of one learning resource module (Instructional Multimedia) for delivery via the WWW server, and
- the field trailing of the module with two external students who have completed and passed the module

Some of the problems encountered were time-based. The purchase of some of the hardware and software had to be deferred due to uncertainty of the primary equipment and software to be used. In order to extract maximum value from staff training, a decision was made to upgrade to Lotus Notes 4.0 and wait until this became available.

Suggestions/ Dissemination

"Organisational level" support is required as the methodology requires a significant commitment from college management, facilitators and technical staff Additional support from a technology provider would be beneficial.

Conducted by:

WA Department of Training

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RURAL BUSINESS MANAGEMENT

(See screen samples in appendix - page 31 - 33)

To develop four computer learning modules for rural business management and 15 flexible delivery modules for grain production and management curriculum

State

Western Australia

Flexible Approach

Delivery of print based and computer based training for rural industries

Aim/ Methodology

This project involved two aspects. First, the development of computer managed learning (CML) modules in rural business management. These were:

- rural marketing fundamentals
- rural business analysis
- business monitoring and financial control
- rural property planning.

The second part of the project involved the development of paper-based learning materials for training courses in the grain industry.

Participation/ Access

Industry involvement was critical for the success of this project. Firstly, because the industry must and has determined the curriculum and secondly, because industry has the necessary current technical expertise to write the content. Co- operative bulk handling has already given much assistance. C.Y. O'Connor has developed most of the multi-media in-house.

Achievements/ Challenges

The four CML modules are now available from C.Y. O'Connor College. The challenge now lies in promoting the advantages of this mode of learning to a consumer group more familiar with paper materials and correspondence delivery.

Of the fifteen publications, four are published and the remainder are at late stages of pre-publishing. Again, the challenge is to get the recipient organisations, which handle grain throughout Australia, to provide the incentives for their employees to participate in the courses which they have been so instrumental in developing.

Suggestions/ Dissemination

The computer managed learning modules are for the Rural Business Management courses. It is therefore planned to place an article in the C.R.D.P. newsletter. This is the unofficial Rural Business Management courses newsletter for TAFE. A C.Y.O'Connor web page is also planned to promote these and other modules.

Conducted by:

C.Y. O'Connor College of TAFE

Contact:

Mr Mike Jefferson Ph (08) 9622 3905 Fax (08) 9622 5805

DEVELOPMENT AND DELIVERY OF NATIONAL METALS MODULE VIA FLINA

To establish a national electronic network of providers in the metals area and to co-operate in the trial delivery of a module

State

Western Australia

Flexible Approach

internet based training delivery of a module

Aim/ Methodology

A module was selected for delivery after making contact with other States. The selected module now is NBB13 Engineering Science, a module of wide usage, accounting for approximately 8000 enrolments per year nationally. Module NBB06 Machining was previously selected but was rejected due to the high costs of inserting the graphics and the problems associated with the practical component.

Text based module resources have been developed for the next stage of the project, which is, inserting the module on the internet.

The identification of students has been progressed and at this point in time three target groups (Victoria, Canberra and Robe River Iron) have nominated to trial the module. Further groups are to be identified.

Participation/ Access

Three TAFE Colleges/Institutes have been nominated to trial the module on the internet:

1. Box Hill Institute - Victoria
   Contact person: Mr Clive Shaw Phone: (03) 9286 9213
2. Canberra Institute of Technology
   Contact person: Mr Ken Milles Phone: (06) 207 3818
3. Robe River Iron (Wickham WA)
   Contact person: Mr Bill Stiner Phone: (08) 9159 2362

Local metro colleges will also be contacted.

Achievements/ Challenges

- Verbal agreement for copyright was made between Mr Bert Beevers and ACTRAC Products Ltd on 24 April 1997. Written agreement is still to be finalised.
- Three targets groups have been identified. Further groups still have to be found.
- Feedback reports from the target groups on the effectiveness of the project are to be collected and analysed.

Conducted by:

TAFE Metals Consortium, Western Australian

Contact:

Mr Bert Beevers Ph (08) 9274 9316 Fax (08) 9250 1113

OPEN ACCESS TO TAFE STUDENTS VIA THE INTERNET

To develop four national modules at Certificate IV level in information technology for delivery over the internet

State — **Western Australia**

Flexible Approach — **internet based training delivery of national learning modules**

Aim/ Methodology

The aim was to develop and deliver up to 4 modules of the Certificate level IV in information technology over the internet. The 4 modules chosen were word processing operations, spreadsheet operations, 3GL program design and commercial database packages #1.

It was intended that the project would include the preparation of online materials and enrolment of 100 students in the modules.

Participation/ Access

The project involved links between members of the Department of Training, other campuses of North Metropolitan College of TAFE and other TAFE colleges, Web developers, Curtin University and OTEN.

Processes and materials for the four modules chosen have been developed. The modules cover a broad range of delivery requirements and as such represent a good test of flexible delivery needs.

Limited enrolments have occurred to date. Enrolment form procedures and incompatibility between software packages (an unreliable electronic messaging system) were major factors in the reduced enrolments. It is anticipated that targeted enrolments will be exceeded eventually.

Achievements/ Challenges

The project enabled considerable skills to be built up amongst staff, and proved that delivery via the internet is feasible and can be used for delivery of conventional modules by existing staff.

Suggestions/ Dissemination

The project team suggest that achievements can be classified in two forms. The first is the loading of the materials onto the internet. Knowledge has been disseminated by virtue of their existence on the WWW. The second is the wealth of experience gained by teaching and project staff.

Issues for consideration by new ventures include the importance of an attractive, navigable and succinct information source that is pre-planned, rather than developed as training materials are loaded. It is important for authors to be skilled in the presentation of information on the internet as opposed to traditional (linear) approaches.

Enrolment procedures were considered too complex to be fully completed via the internet. There are several different forms in use and specialist knowledge is required to choose the correct form. This difficulty was overcome in this project by obtaining the name and address of students and sending the correct forms by post for the students to complete. The continual emergence of new software and hardware makes for regular debate over equipment options.

Copyright is a major issue: *online delivery makes use of many resources for which copyright is held by a party outside the college.* In this project, it was assumed that students were equipped with the appropriate text books and references.

Conducted by: — **North Metropolitan College of TAFE (Joondalup campus)**

Contact: — **Mr Ray Smith Ph (08) 9233 1045 Fax (08) 9233 1066**

ACCESS TO VET VIA EdNA AND CML

To establish 15 CML centres in regional and enterprise centres throughout Tasmania and provide infrastructure to increase access to vocational education and training via LAN, WAN or modem connection, including student induction

State — **Tasmania**

Flexible Approach — **Delivery of education and training via computer**

Aim/ Methodology — The project aimed to increase access to vocational education and training through the EdNA and computer managed learning. The project involved the selection of a steering committee, the purchase of student material and equipment and attracting enrolments via marketing and partnerships.

Participation/ Access — Total student numbers to October 1996 was 91, with actual student contact hours in excess of 11,715. Eight access centres in regional locations around the State were established, with plans for more centres in other outlying areas.

Project budget was expended on the purchase of students materials, employment of staff, induction of computer managed learning students, and purchase of computer hardware, including modems and printers, and software for use at the centres.

The project is continuing and is now concentrating on the maintenance of the installations and students participation. Smithton came online early in 1997 and King Island will be online in the second half of 1997. Also, in the second half of 1997 centres will be established at Dover and Swansea to service the communities there.

Achievements/ Challenges — Students who availed themselves of this facility have felt that they are finally able to access education and training regardless of their location or isolation. Numerous people in the region who benefited from participation in this project have expressed their appreciation to the Hobart Institute of TAFE.

Overcoming online communication issues has identified an area that requires further research. As an equity issue, facilities of this nature provide access where it was previously not available. However, the rising costs of access to the internet through Service Providers and the lack of Points of Presence (POPs) may prove a challenge to equity.

Suggestions/ Dissemination — It is evident that there is a requirement for further research into the online network infrastructure. Furthermore, information about POPs and other communication facilities should be more readily available to people in regional and isolated areas and at a cheaper rate than people in major cities where education and training is readily available. This will require a wider marketing/dissemination of the information.

Conducted by: — **Flexible Learning Centre, DVET, Tasmania**

Contact: **Mr Peter Higgs** **Ph (03) 6233 7262 Fax (03) 6233 7997**
Email peterh@dvet.tas.gov.au

WORKPLACE COMMUNICATION

(See screen samples in appendix - page 34 - 35)

To develop and deliver the national communication module "Workplace Communication" via the internet.

State — **Australian Capital Territory**

Flexible Approach — **internet learning using multimedia tools**

Aim/ Methodology — The aim of this project was to deliver the national communication module *Workplace Communication* using advanced telecommunications and flexible delivery. Associated development of resources and delivery systems would occur in co-operation with other States and Territories.

Participation/ Access — Identified clients included trade students in many industries, entry level trainees, labour market trainees and secondary schools students. The pilot has worked well, however with a smaller student group than envisaged. There are currently twenty learners involved in the trial; eleven in the Certificate in Business Studies (five mature age learners), five trainees in the Certificate in Arts (Interactive Media), three trainees in the Certificate in Information Technology, and one learner of a non English speaking background in the Certificate in Garment Production.

Achievements/ Challenges — The participants have reported that learning via the internet has been rewarding and challenging, and that their communication and computing skills as well as their confidence levels have improved. Ongoing IT support was vital during the pilot.

Delays in establishing internet connections for potential interstate industry users of the module has decreased the number of students involved in the trial.

The project manager presented a paper on the project at a conference at Sydney University in September 1996, enabling many conference participants to browse through the online module. This has led to several expressions of interest from other organisations in using or purchasing the package.

An online evaluation form has been designed to obtain learner feedback during the trial. Further development of the module is planned, to include audio features and to enhance interactivity.

Suggestions/ Dissemination — The project manager's suggestions for dissemination include publishing findings in Australian Training Review and other publications, and creating links to the National Staff Development Strategy.

Conducted by: — **Canberra Institute of Technology, Communication Department**

Contact: **Ms Helen Topor** **Ph (06) 207 3414 Fax (06) 207 3139**
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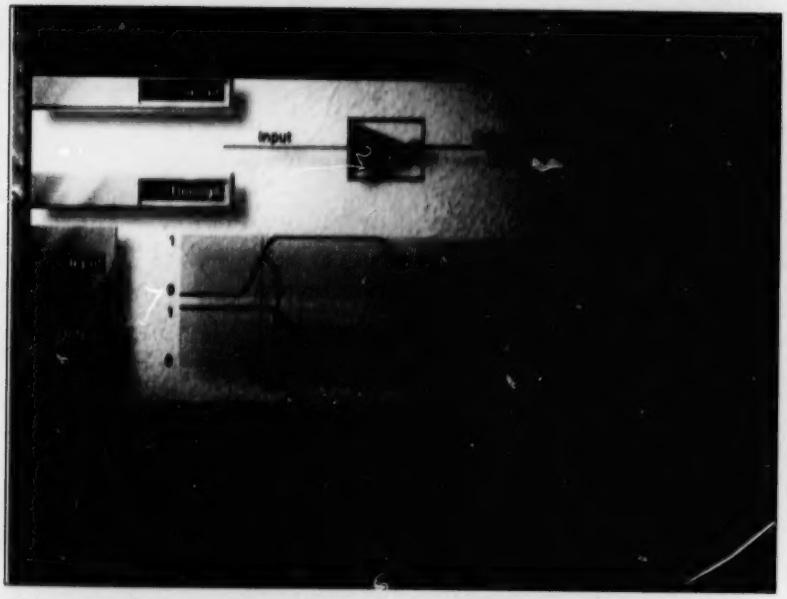
sample screens

APPENDIX

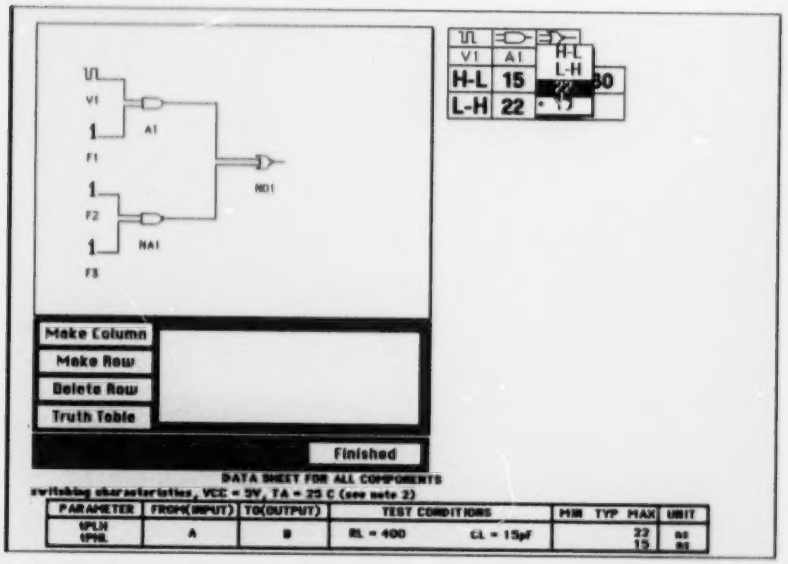
Attached are sample screens from some of the pilot programs which incorporated computer aided learning products. These attachments are examples of just some of the work that has been produced from the pilots. All of the projects have produced interesting information and outcomes but it was not possible to document all the output in this report.

The sample screens come from the following pilots:

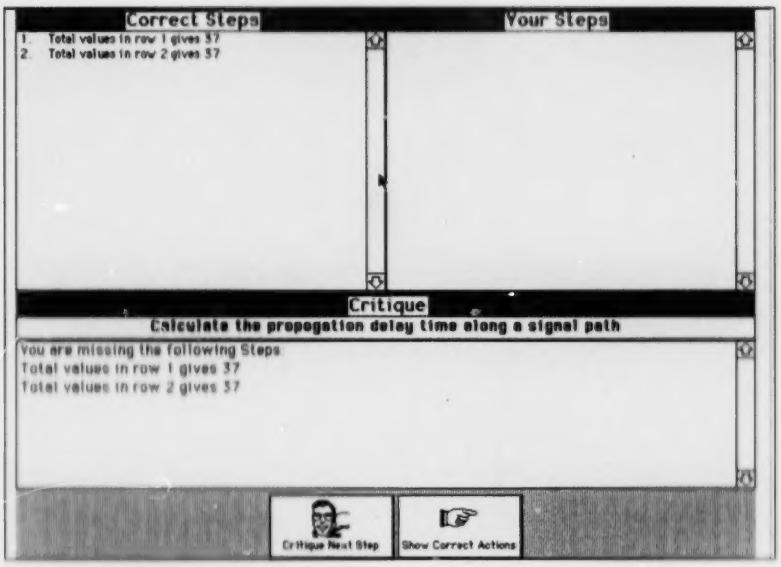
- Electronic Propagation Delays (p 21)
- Rural Business Management; and (p 24)
- Workplace Communication (p 28)



This screen depicts a simple electrical component (an inverter) and the delays which are inherent in the transmission of a signal through this component. A student interacts with the display by clicking the button on the right hand side of the screen which corresponds to a "concept" which the student will need to understand. In the screen above, a student is clicking on the "inverter" button; this causes the "inverter" to be highlighted in the diagram and a definition of "inverter" to appear in the box below.



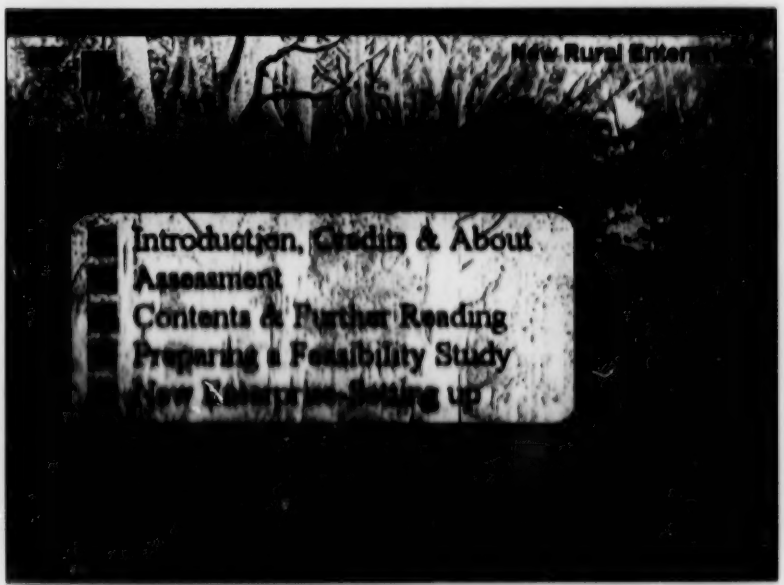
This screen depicts part of an interactive task simulation. The aim of this task simulation is to teach students to analyse a simple circuit by making a table. The columns of the table are the relevant components and the rows are the different transitions which occur when a signal is passed through the circuit. In the example, the student has almost completed the analysis of the circuit and is selecting the appropriate delay for the selected component (NO1, the output).


Correct Steps
Your Steps
1. Total values in row 1 gives 37
2. Total values in row 2 gives 37
Critique
Calculate the propogation delay time along a signal path
You are missing the following Steps:
Total values in row 1 gives 37
Total values in row 2 gives 37
Critique Next Step
Show Correct Actions

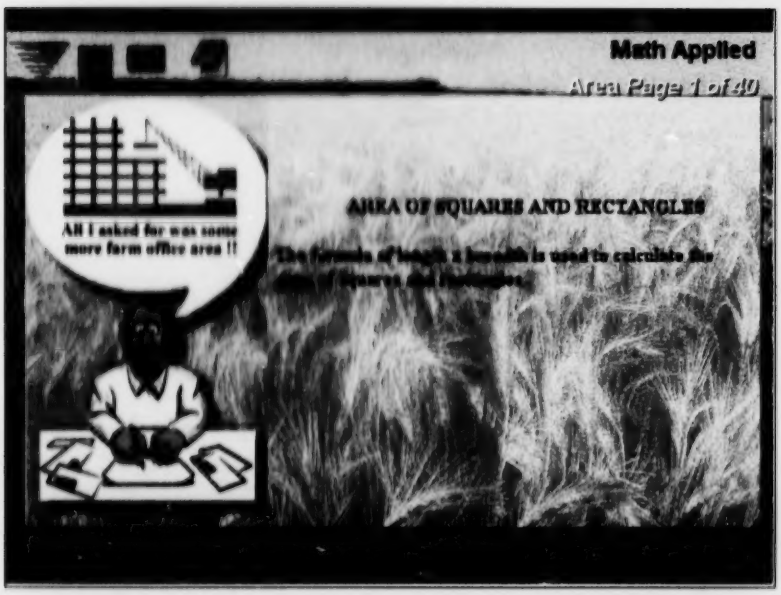
This screen depicts part of the feedback a student would receive after completing the task simulation. Students see the correct steps which they should have taken, the actual steps (your steps) which they took and a critique of their actions. In the example the student has failed to take the last few steps which are necessary to complete the analysis and receives the appropriate feedback.

RURAL BUSINESSS MANAGEMENT (See page 24)

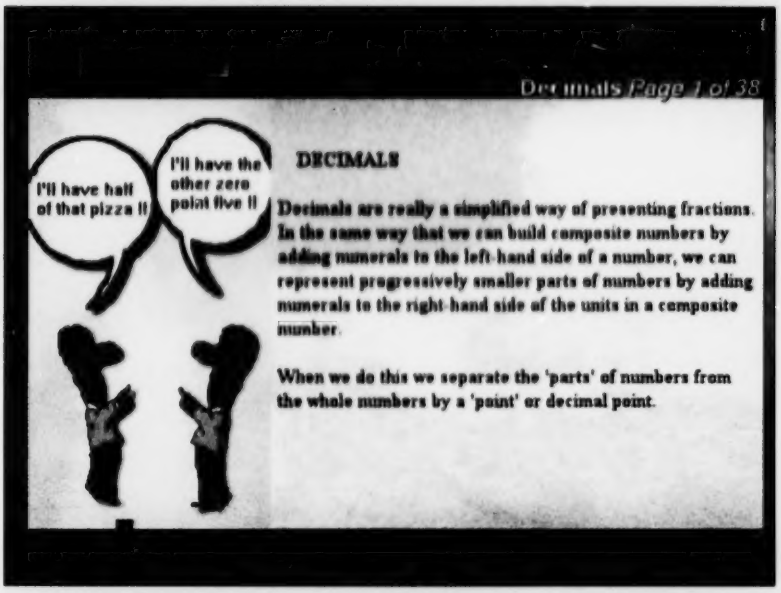
The following screens demonstrate the varied topics from the four computer learning modules developed under the Rural Business Management pilot.



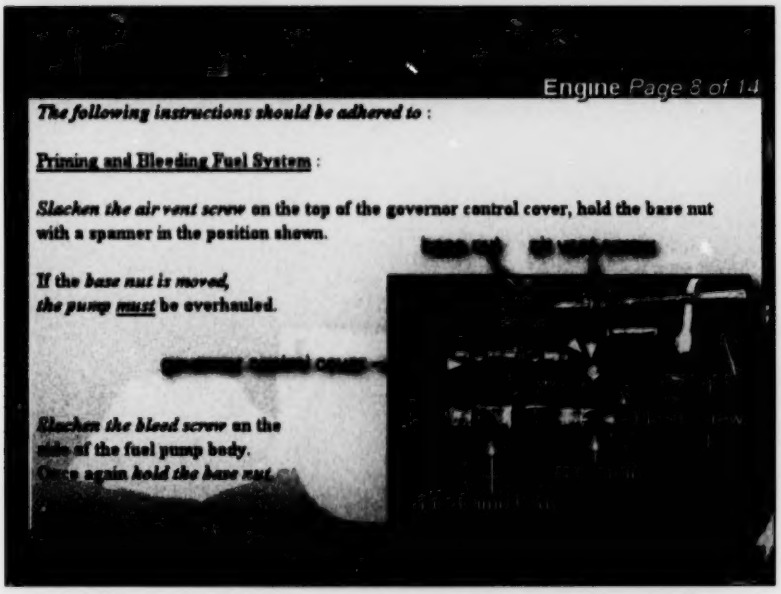
This is a general introduction screen.



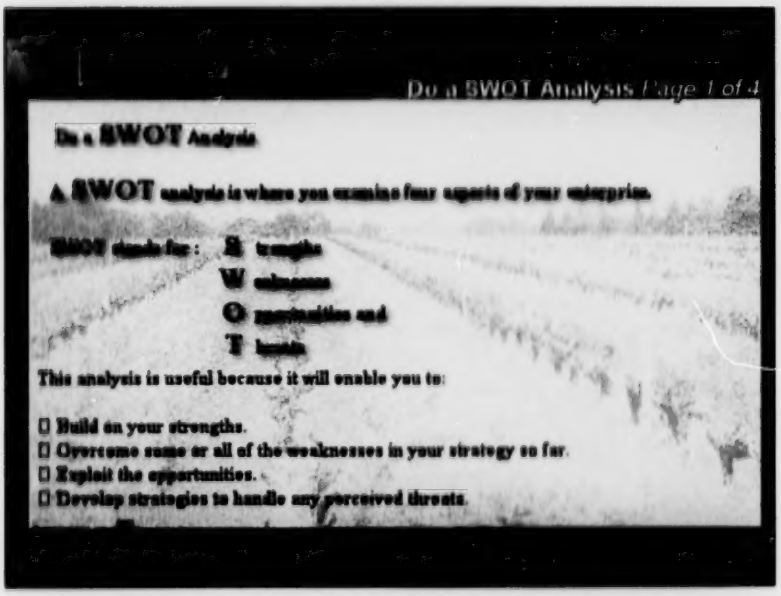
The above screen explains how to calculate the area of square and rectangles to the user and demonstrates how a cartoon can be used to break up an otherwise dry topic.


Decimals Page 1 of 38
I'll have half of that pizza !!
I'll have the other zero point five !!
DECIMALS
Decimals are really a simplified way of presenting fractions. In the same way that we can build composite numbers by adding numerals to the left-hand side of a number, we can represent progressively smaller parts of numbers by adding numerals to the right-hand side of the units in a composite number.
When we do this we separate the 'parts' of numbers from the whole numbers by a 'point' or decimal point.

This screen comes from the chapter Decimals and gives another example of the use of a cartoon to break up an otherwise dry subject.

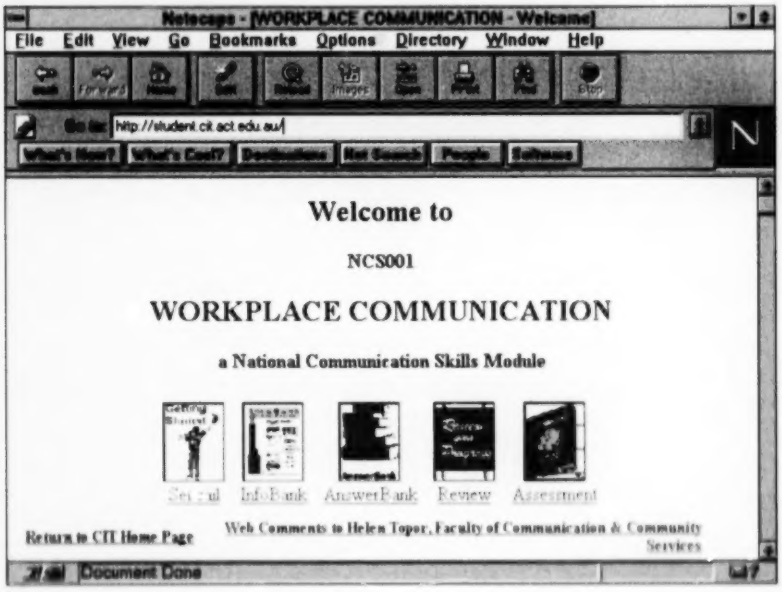

Engine Page 8 of 14
The following instructions should be adhered to :
Priming and Bleeding Fuel System :
Slacken the air vent screw on the top of the governor control cover, hold the base nut with a spanner in the position shown.
If the base nut is moved, the pump must be overhauled.
Slacken the bleed screw on the
of the fuel pump body.
Once again hold the base nut.

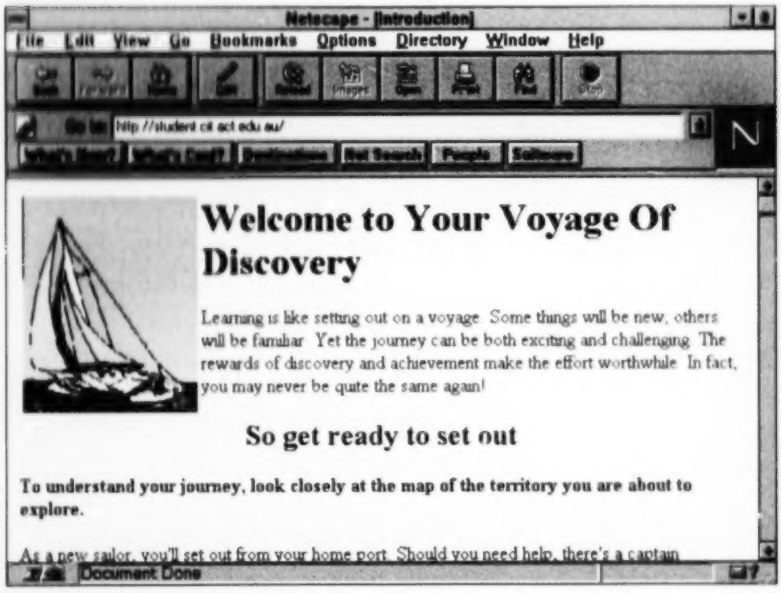
This screen relates to End Loader Operation and was created as part of a demonstration module for Co-operative Bulk Handling.

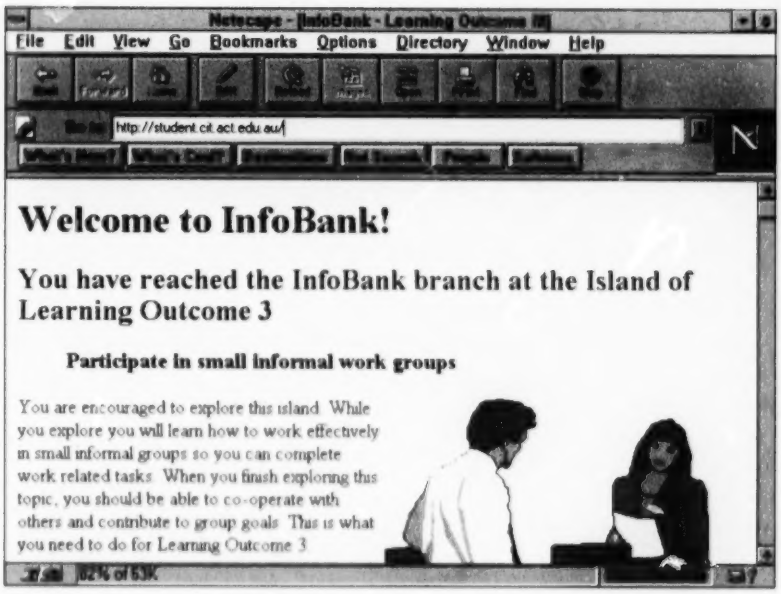

Do a SWOT Analysis Page 1 of 4
Do a SWOT Analysis
A SWOT analysis is where you examine four aspects of your enterprise.
SWOT stands for :
S
W
O
T
This analysis is useful because it will enable you to:
Build on your strengths.
Overcome some or all of the weaknesses in your strategy so far.
Exploit the opportunities.
Develop strategies to handle any perceived threats.

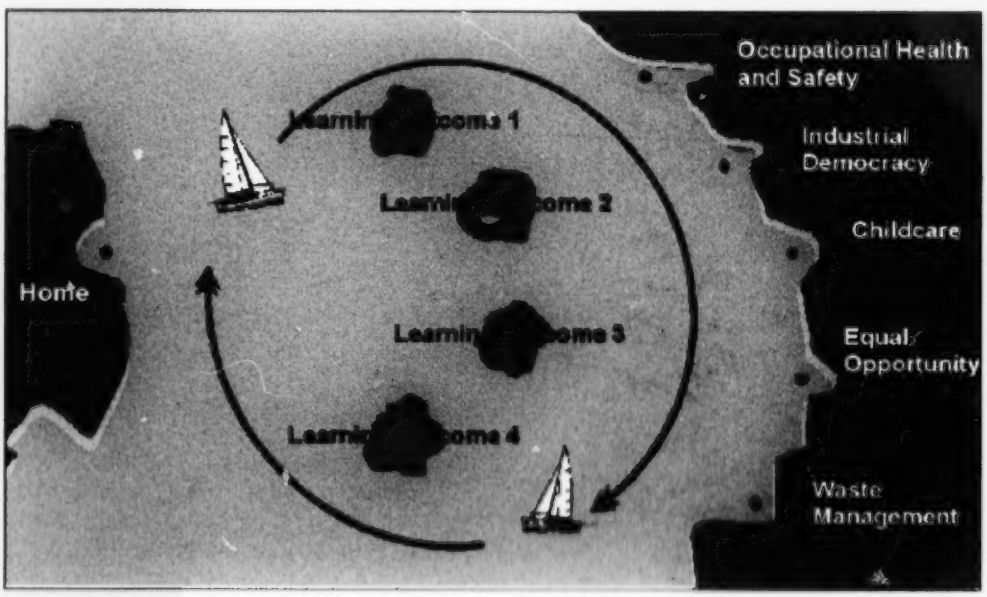
This screen is one of the screens relating to undertaking a SWOT analysis.

The following screens demonstrate the internet based training used to deliver the national communication module Workplace Communication.




Netscape - [Introduction]
File Edit View Go Bookmarks Options Directory Window Help
http://student.cit.act.edu.au/
Welcome to Your Voyage Of Discovery
Learning is like setting out on a voyage. Some things will be new, others will be familiar. Yet the journey can be both exciting and challenging. The rewards of discovery and achievement make the effort worthwhile. In fact, you may never be quite the same again!
So get ready to set out
To understand your journey, look closely at the map of the territory you are about to explore.
As a new sailor, you'll set out from your home port. Should you need help, there's a captain
Document Done


Netscape - [InfoBank - Learning Outcome 3]
File Edit View Go Bookmarks Options Directory Window Help
http://student.cit.act.edu.au/
Welcome to InfoBank!
You have reached the InfoBank branch at the Island of Learning Outcome 3
Participate in small informal work groups
You are encouraged to explore this island. While you explore you will learn how to work effectively in small informal groups so you can complete work related tasks. When you finish exploring this topic, you should be able to co-operate with others and contribute to group goals. This is what you need to do for Learning Outcome 3.
82% of 53K


Occupational Health and Safety
Industrial Democracy
Childcare
Equal Opportunity
Waste Management
Home

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